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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/781,086	02/17/2004	Brock J. LaMeres	10031039-1	3393

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EXAMINER	
HOLLINGTON, JERMELE M	
ART UNIT	**PAPER NUMBER**
2829	

DATE MAILED: 09/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/781,086	LAMERES ET AL.	
	Examiner	Art Unit	
	Jermele M. Hollington	2829	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *11 July 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-25* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *10-21* is/are allowed.

6)☒ Claim(s) *1-9 and 22-25* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-3 and 6-9 are rejected under 35 U.S.C. 102(b) as being anticipated by Levy (5534787).

Regarding claim 1, Levy discloses [see Figs. 3-5] a probe for probing test points on a target board (not shown), comprising: a printed circuit board (printed circuit board 10) having i) a plurality of signal routes (wiring patterns 47) [col. 3, lines 35-36] for routing signals to a test instrument [not shown but see col. 3, lines 32-35], and ii) a plurality of holes [shown but not number]; and a plurality of spring pins (pin connector body 44 and connector 46) for probing the test points on the target board, each spring pin (44 and 46) of which is i) disposed perpendicularly to the first PCB (10), and ii) engaged by one of the holes in the PCB (10), and iii) electrically coupled to at least one signal route of the first PCB (10) [col. 3, lines 50-54].

Regarding claim 2, Levy discloses wherein bodies of at least some of the spring pins (44 and 46) are frictionally engaged by the holes in the PCB (10).

Regarding claim 3, Levy discloses at least some of the holes in the PCB (10) are plated and electrically coupled to at least one signal route (47) of the PCB (10); and at least some of the spring pins (44 and 46) are inserted into and soldered to the plated holes [col. 3, lines 50-54].

Regarding claim 6, Levy discloses an alignment mechanism (base plate 12), attached to the first PCB (10), for aligning the probe (44 and 46) with respect to said test points (not shown).

Regarding claim 7, Levy discloses the alignment mechanism (12) comprises a plurality of alignment pins (shaft 30).

Regarding claim 8, Levy discloses comprising a mechanism (base plate 12), attached to the first PCB (11), for securing the probe (44 and 46) to said target board.

Regarding claim 9, Levy discloses said mechanism (12) is a plurality of rivets.

3. Claims 22-25 are rejected under 35 U.S.C. 102(b) as being anticipated by Murphy (5157325).

Regarding claim 22, Murphy discloses probing test points (test contact points 16) on a target board (printed circuit board under test 14), comprising: selecting a test probe (fixture 20) comprising a plurality of spring pins (test pins 30) that are arranged perpendicularly to a main body (PCB 26) portion of the test probe (20), said main body portion (26) comprising a first printed circuit board (PCB) to which the plurality of spring pins (30) are electrically coupled [via test contact points 38); moving the test probe (20) over the target board (14) to seat an alignment mechanism of the test probe (20) to a corresponding alignment mechanism of the target board (14)[see col. 6, lines 23-29; col. 11, lines 16-32]; applying pressure [see arrow 64 and 98] to at least one of the i) test probe (20) or ii) target board (14) to cause the plurality of spring pins (30) to engage the test points (16) on the target board (14); and routing signals from the test points (16) to a test instrument via the test probe (20).

Regarding claim 23, Murphy discloses while applying said pressure [shown as arrows 64 and 98], applying enough pressure to cause a securing mechanism of the test probe (20) to engage a securing mechanism of the target board (14).

Regarding claim 24, Murphy discloses said moving comprises moving said first PCB (26) along a path that is substantially parallel to said target board (14).

Regarding claim 25,Murphy discloses the spring pins (30) of the selected test probe (20) are electrically coupled to traces (32) of a second PCB (PCB 28) that is perpendicularly attached to the first PCB [via connector 88 and 94].

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. Claims 4-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schmid et al (6150830) in view of Holcombe et al (6867609).

Regarding claims 4-5, Levy discloses [see Figs. 3-5] a probe for probing test points on a target board (not shown), comprising: a printed circuit board (printed circuit board 10) having i) a plurality of signal routes (wiring patterns 47) [col. 3, lines 35-36] for routing signals to a test instrument [not shown but see col. 3, lines 32-35], and ii) a plurality of holes [shown but not number]; and a plurality of spring pins (pin connector body 44 and connector 46) for probing the test points on the target board. However, he does not disclose tip-network components comprise isolation resistors as claimed. Holcombe et al disclose tip-network component (220a) comprise isolation resistors [see col. 3, lines 33-34 and lines 42-44]. Further, Holcombe et al teach that the addition of isolation resistors is advantageous because it is well known in the art that a tip-network component includes isolation resistor. It would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify the apparatus of Schmid et al by adding isolation resistors to the network component as taught by Holcombe et al since it is well known in the art to have an isolation resistor with the network component.

Conclusion

7. Applicant's arguments with respect to claims 1-9 have been considered but are moot in view of the new ground(s) of rejection.

8. Claims 10-21 are allowed over the prior art.

9. The following is a statement of reasons for the indication of allowable subject matter: regarding claim 10, the primary reason for the allowance for the claim is due to a probe comprising, in combination with other limitations, a second PCB that is abutted perpendicularly to a first PCB, with an edge of the second PCB opposite a first edge being abutted to the first PCB. Since claims 11-19 depend from claim 10, they also have allowable subject matter.

Regarding claim 20, the primary reason for the allowance of the claim is due to a method for forming a probe comprises, in combination with other limitations, abutting a cut edge of a first PCB to a second PCB and electrically coupling a signal routes of a first PCB to signal routes of that second PCB, by means of a via cross-sections, so that the first PCB extends perpendicularly from the second PCB. Since claim 21 depends from claim 20, it also has allowable subject matter.

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jermele M. Hollington whose telephone number is (571) 272-1960. The examiner can normally be reached on M-F (9:00-4:30 EST) First Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nestor Ramirez can be reached on (517) 272-2034. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jermele M. Hollington
Patent Examiner
Art Unit 2829

JMH
September 8, 2005